

1 REMARKS

2 The affidavits referred to herein are attached to the earlier responses and are incorporated
3 herein by reference.

4 The claimed process is "creating" acid at a point where reaction may be carried forward
5 without stable intermediaries formed.

6 Prior art fails to suggest this or to provide a mechanism for this. What the prior art does
7 suggest is a method of making a stable intermediary which must be pyrolyzed in order to react
8 with wood cellulose.

9 The present invention is not one where the prior art suggests that it would be obvious to
10 create acid in the wood. The present invention is a process as a whole is unique even though
11 some of the chemicals previously were used in the prior art but are not utilized in the same
12 fashion.

13 The method of using an acid reactant generated when applied to the wood is not obvious
14 from prior art suggesting similar reactants but different reactants which neither claim the acid
15 reactant nor the resulting compounds. In re Ochiai, 71 F3d 1565, 37 USPT 2d 1127 (CAC
16 1995).

17 The absence of a known or an obvious process for carrying out the reaction which prior
18 knowledge is rebutted with the Nair affidavit as well as the test results should be adequate to
19 overcome any presumption of obviousness. See In Re Hoeksema, 399 F2d 269, 158 USPT 596,
20 55 CCPA 1493 (CCPA 1968).

21 There has to be some indication that those skilled in the art would have found it obvious
22 not only to have available the chemicals in this reaction, but to use them in a combination of the
23 type which is taught in the instant patent and also that they would have expected or known to get

1 a reaction with the same properties and characteristics which is clearly not the case. In Re Willis,
2 445 F2d 1060,172 USPQ 667 (CCPA 1972).

3 This is not a case where the combination of ingredients to an obvious development. The
4 prior art suggestions failed to prompt for the substitution of a substance generating the acid only
5 upon application to the wood (Nair Affidavit). Instead, the material substitution are inconsistent
6 with the suggestions in the art and provide greatly improved results because the prior art never
7 attempted to carry out the reaction which is carried out in the instant invention. To try to say that
8 because in completely different experiments, an attempt was made to obtain a similar reaction
9 (albeit unsuccessfully or inefficiently) should not permit the examiner to then say that in an
10 experiment where the same reaction was not attempted the fact that similar ingredients were
11 mentioned somehow allows for a combination of the two dissimilar prior arts.

12 In Re Grasselli, 713 F2d 731, 218 USPQ 69 (CA 1983), In Re Taborsky, 502 F2d 775, 183
13 USPQ 50 (CCPA 1974).

14 This is not a case where it was suggested to substitute one material for another and
15 instead the entire process being carried out is chemically dissimilar as shown by the affidavit
16 which have been filed herewith. (Nair Affidavit)

17 Unlike the suggested experimentation with known additives, this is a new combination
18 which produces a result which is not suggested by the prior art and therefore is not obvious.
19 Claims have been amended in order to be narrowly construed relative to the makeup of the active
20 ingredients. See Union Carbide Corp. V. Dow Chemical Company, 682 F2d 1136, 217 USPQ
21 1195 (CA 5 Tex 1982).

22 The critical proportions taught in some of the claims herein involve something beyond
23 that which is obvious to the worker skilled in the art since the skilled worker in the art would not

1 even attempt a reaction of the type which is taught herein since there is no reaction of the type
2 taught here suggested by the prior art in question. In Re Gillette, 30 CCPA 900, 133 F2d 910, 56
3 USPQ 530 (CCPA 1943).

4 The prior art cited is the Saka case. As covered by the earlier affidavits and the new
5 affidavit attached hereto, the Saka disclosure does not tell how to use the chemicals which are
6 used in the present specification in order to get a reaction of the type which is disclosed in this
7 invention.

8 The examiner has stated that the disclosure in Saka is not adequately recognized in the
9 present patent, but the examiner has failed to show specific language in Saka that does anything
10 more than suggest that acids may be used to catalyze a different reaction (Nair Affidavit). This
11 has no meaning in this particular case because even though acids can catalyze any number of
12 different reactions, there is no prior art which teaches how to catalyze the reaction taught with
13 Kelsoe with any acid.

14 Saka deals with a completely different process that being the hydrolyzation of an
15 alkoxide. The process is carried out in a different way and the suggestion that an acid may
16 catalyze a reaction in Saka has very little or nothing to do with the reaction in the instant case
17 which is the substitution of silicone compounds onto the cellulose structures in place of hydroxyl
18 groups.

19 Saka requires pyrolysis in order to break up the stable intermediaries and obtain a similar
20 in efficient and result (Nair Affidavit).

21 The Saka process suggested (not adequately disclosed) is one of for creating stable
22 intermediaries by an acid catalyst. The present invention avoids this and uses acid from a heat
23 generating reaction in wood in order to begin and continue the reaction of silicon to cellulose.

1 The Kelsoe process is completely different and would not work with the formation of the
2 stable intermediaries.

3 The examiner effectively is inserting every step of the present invention into Saka up to
4 the inclusion of acid and then concludes that this is obvious just because acid is mentioned in
5 reference.

6 Effectively the examiner holds that to use acids to catalyze a completely unrelated
7 reaction renders the present invention obvious.

8 In any case, the use of the acid catalyst in the Saka invention is not expected to produce a
9 surprising result. In this case with a specific combination of chemicals applied to specific
10 methods, the catalyst actually functions to do something not suggested in Saka. Nor is there any
11 suggestion to combine the method taught in Saka with any other method to accomplish a
12 chemical substitution of the type taught by Kelsoe. The fact that Saka did not see this is proof
13 without the affidavit that it was not obvious.

14 Despite the failure of the prior art, the examiner continues to pull out this language and to
15 cite it in the abstract with nothing to tie it in with the prior art or to make it render the prior art
16 similar to the process which the present specification teaches. The affidavit serves to rebut this.

17 The examiner should not hold that the mention of a catalyst in the prior art with
18 experiments which clearly by their own disclosure, fail to accomplish the result of the present
19 invention somehow can be stretched to be what it is not. Results have been presented using
20 experimental data. Attempting to obtain a catalyzed exothermic reaction using the prior art with
21 acid fails. A theoretical basis for this failure has been submitted in Nair (Nair Affidavit) It is
22 submitted that the examiner, while perhaps correct in requesting the additional affidavit which
23 are attached hereto, should not stretch the prior art far beyond the point where it is reasonable to

1 say that the prior art discloses using a catalyst creating an acid upon application to the wood.

2 This is a case where all the secondary indications indicate a non-obvious and novel result.

3 The only thing that the prior art shows is that this technology is novel and unobvious by the fact
4 that the prior technicians attempting to accomplish the similar reactions failed to accomplish one
5 which works in the same manner and with the efficiency of this reaction, failed to use the
6 chemical combinations in the claims to get a result as taught and always required pyrolysis to set
7 an end result.

8 The claims in this case have been amended to show that one step is not only the use of an
9 acid generating catalyst but also to include the step of "creating an acid within the wood by
10 reaction of a chemical producing an acid within the wood when introduced into the wood".

11 In order to determine the difference between the present invention which creates an acid
12 upon exposure to the wood, it is necessary to observe why the present invention works
13 exothermically as opposed to the prior art which suggests the addition of an acid to the solution
14 in order to catalyze the hydrolysis reaction.

15 The hydrolysis reaction which is shown in the prior art (Nair Affidavit) does nothing to
16 further the reaction but instead creates another stable intermediary which stable intermediary will
17 not readily react to the wood in the absence of pyrolysis or an extremely high heat which is both
18 expensive and inefficient in terms of the amount of reaction (Nair Affidavit). To some extent it
19 is questionable as to whether the reaction is effective at all, based on the experimental results
20 which showed that there was continued leaching after the pyrolysis reaction.(Potts Affidavit,
21 Saka)

22 In contrast, the Kelsoe technology by creating unstable reactants within the wood, skips
23 the state of stable intermediaries and hence allows for the reaction with the wood cellulose to

1 occur both spontaneously and sequentially. (Nair Affidavit)

2 The hydrolysis with an acid taught in the prior art is counterproductive to this and in fact
3 defeats the very reaction which by generating stable intermediaries the Kelsoe patents seeks to
4 perform. (Nair Affidavit)

5 While conceivably there might be some way to maintain the Saka intermediaries as
6 unstable and while future patents should certainly cover the issue of reacting unstable
7 intermediaries having the basic chemical composition as set forth hereinabove for the reactants,
8 the present invention defines this in terms of the most practical method of creating the unstable
9 intermediaries in the wood which has nothing to do with adding an acid to a solution to perform
10 unnecessary hydrolysis which is the suggestion of the prior art.

11 It would be impossible to stretch the prior art to suggest that they add a reactant which
12 creates an acid upon application to the wood given the fact that there is absolutely no suggestion
13 of that type of technology in the prior art, and the prior art fails to achieve a result in any way
14 suggestive of the type of reaction which is occurring in the Kelsoe technology.

15 The prior art in this case does not teach the creation of an acid upon entry in the wood,
16 but only teaches the use of acid catalysts and the like to perform a hydrolysis reaction.

17 As discussed in the affidavit, the use of these acids will do nothing more but create a
18 stable intermediaries which would prevent the very type of reaction which is taught in the Kelsoe
19 case, absent pyrolysis. (Potts Affidavit, Nair Affidavit)

20 Hypothetically, it might be that the initial reaction of the acid generator avoids the stable
21 intermediary and thereafter generates a sufficient amount of heat in order to continue the drive of
22 the reactions which would otherwise result in stable intermediaries, but under any circumstance
23 whatever the chemistry, the result is one which is never suggested by the prior art and in order to

1 anticipate, "all elements of the invention or of the equivalence must be found in the single
2 description or structure, where they do substantially do the same work in substantially the same
3 way". Marasco v Compo Shoe Machinery Corp., 325 F2d 395, 140 USPQ 147 (1963, CA1
· 4 Mass); Bain v M.A. Hanna Co., 331 F2d 974, 141 USPQ 559 (1964, CA6 Mich); Monroe Auto
5 Equipment Co. v Heckethorn Mfg. & Supply Co., 332 F2d 406, 141 USPQ 549 (1964, CA6
Tenn). Greening Nursery Co. V J & R Tool & Mfg. Co., 376 F2d 738, 153 USPQ 660 (1967,
6 CA8 Iowa); Metal Arts Co. V Fuller Co., 389 F2d 319, 156 USPQ 605 (1968, CA5 Tex);
7 Scaramucci v Dresser Industries, Inc., 427 F2d 1309, 165 USPQ 759 (1970, CA10 Okla); Illinois
8 Tool Works, Inc. V. Sweetheart Plastics, Inc., 436 F2d 1180, 168 USPQ 451 (1971, CA7);
9 Straussler v United States, 168 Ct Cl 852, 339 F2d 670, 143 USPQ 443 (1964); Jeanotte v
10 Morrill Adams Co., 38 F2d 884 (1930, DC Me); Union Simplex Train Control Co. V General R.
11 Signal Co., 11 F Supp 854 (1935, DC NY); McLemore v Southern Implement Mfg. Co., 227 F
12 Supp 272, 141 USPQ 7 (1964 , ND Miss); H.K. Porter Co. V Gates Rubber Co., 187 USPQ 692
13 (1975 DC Dist Col).

15 In this case, the suggestion of the use of an acid for hydrolysis is not suggestive to
16 generate an acid upon exposure to wood in the present invention and even if it would stretch to
17 cover that, it was never seen in the prior art, nor was it any way suggested in the prior art that,
18 you could change the chemicals and the process to the what is present in Kelsoe and drive this
19 self initiating reaction. The prior art fails to solve the problems, fails to achieve the result and
20 therefore cannot anticipate the subsequent patent by Kelsoe which successfully solves the
21 problem of how to drive this reaction without pyrolysis. Dowless v Hooks, 125 F Supp 96, 102
22 USPQ 386 (1954, DC NC).

23 While not specifically rejected on the basis of 35 U.S.C.103 a discussion of how that

1 applies is also educational.

2 The use of an acid reactant patented by the applicant is not obvious when the prior art
3 suggests similar reactions with different acid reactants. Here a similar reaction is not suggested.
4 The result of Saka is to prevent a similar reaction. While it is alleged that the prior art is not
5 specific enough to indicate the types of acids even when limited to strong acids, in this case,
6 neither the claimed acid reactant nor the resulting reaction are suggested by the art. In re Ochiai,
7 71 F3d 1565, 37 USPQ2d 1127 (CA FC 1995).

8 It is to be noted that there is considerable evidence available under modern technology
9 which fails to show that the prior art processes produces the same catalyst as claimed in the
10 patent and therefore fails to anticipate it. Considerable evidence available under modern
11 technology failing to show that prior art polymerization process produced the same catalyst as
12 claimed in this patent fails to anticipate. Studiengesellschaft Kohle mbH v Dart Industries, Inc.,
13 549 F supp 716, 216 USPQ 381 (1982, DC Del), affd 726 F3d 724, 220 USPQ 841 (1984, CA).

14 A broad suggestion of an acid being used to catalyze a different reaction is hardly
15 significant in this case. In a similar case, a prior art suggestion of oxidation by alkaline chlorine
16 and mentioning hypobromite was not construable to suggest oxidation by an alkaline solution of
17 chlorine involving hypochlorite and therefore the reference did not anticipate the claimed process
18 achieving a higher yield using the hypochlorite. Prior art suggesting “oxidation by alkaline
19 chlorine or bromine solution” and mentioning hypobromite is not construable to suggest
20 oxidation by alkali solution of chlorine involving hypochlorite so that reference does not
21 anticipate claimed process achieving higher yield using hypochlorite. In re Application of Meyer,
22 599 F2d 1026, 202 USPQ 175 (1979, Cust & Pat App). The applicants process claims should be
23 allowed because the applicant teaches a definite step (generating an acid (particularly a strong

1 acid) upon application to wood and in quantities not disclosed in the prior art) to the prior art
2 does not teach which results in a distinctly different result in the cited patents. In re Kaplan, 110
3 F2d 670, 45 USPQ 175 (1940).

4 Incidental similarities are not enough to render the invention anticipated. There is not any
5 anticipation or any incidental similarities of the type envisioned since the Saka technology
6 indicates just the opposite. American Original Corp. v Jenkins Food Corp., 696 F2d 1053, 216
7 USPQ 945 (1982, CA4 Va).

8 35 U.S.C. §§ 103:

9 The use of an acid reactant patented by the applicant is not obvious from prior art
10 suggesting similar reaction but different acid reactants. While it's alleged that the prior art is not
11 specific enough to indicate the types of acids in this case neither the claimed acid reactant nor the
12 resulting reaction is suggested by the prior art. In re Ochiai, 71 F3d 1565, 37 USPQ 2d1127 (CA
13 FC 1995).

14 While it is generally recognized that an acid may be used as a catalyst, where, as here, the
15 prior art fails to appreciate the ability of an acid generated on contact with the wood to make an
16 exothermic reaction without pyrolysis makes the claim on this discovery unobvious so that any
17 103 rejection and any 102 rejection is inappropriate. In re application of Herschler, 591 F2d 693,
18 200 USPQ 711 (CC PA 1979).

19 Nor is it sufficient to say that the chemicals in question inherently generate an acid on
20 contact with the wood and is used to produce the novel result taught in the patent would be
21 obvious. In re Henderson, 52 CC PA 1656, 348 F2d 550 146 USPQ 372 (CC PA 1965). In this
22 case, the invention is not the specific property of the defined compound, but is instead the use of
23 the defined compounds in a process wherein the activity of combined chemicals produces a new

1 and unobvious result. This improved and unexpected result overcomes the obviousness rejection.
2 In re Soni, 54 F3d 746, 34 USPQ 2d 1684 (CAFC 1985). In fact the unknown and substantially
3 greater effect in this was shown with laboratory tests wherein adding acids as described in the
4 prior art (Saka) was attempted without the creation of the acid on contact with the wood. This did
5 not and should not have created the Kelsoe reactions because the Saka modification produces
6 stable intermediaries which still must be pyrolyzed to react with wood. The substantially greater
7 effectiveness is adequate even if no new properties were shown in order to render the invention
8 patentable. In this case a new property and a different process is shown because of the use of the
9 catalyst is made to function on contact with the wood in order to generate an acid and a
10 consequent exothermic reaction different from Saka and without pyrolysis. In re Wiechert, 54
11 CC PA 957, 370 F2d 927, 152 USPQ 247 (CC PA 1967); Special Metals Corporation v.
12 Teledyne Inc., 215 USPQ 698 (WDNC 1982); Imperial Chemical Industries, PLC v. Henkel
13 Corp., 545 Supp 635 215 USPQ 314 (DCDEL 1982).

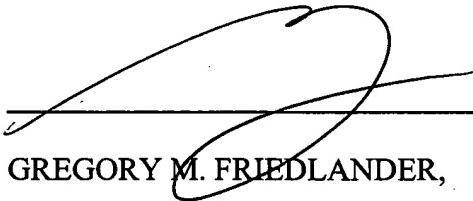
1 **CONCLUSION**

2 For all of the reasons advanced above, Applicant respectfully submits that the application
3 is in condition for allowance and that action is earnestly solicited.

4 The commissioner is hereby authorized to charge any additional fees which may be
5 required for this amendment, or credit any overpayment to Deposit Account 06-2129 in the name
6 of Gregory M. Friedlander.

7 In the event that an extension of time is required, or which may be required in addition to
8 that requested in a petition for an extension of time, the Commissioner is requested to grant a
9 petition for that extension of time which is required to make this response timely and is hereby
10 authorized to charge any fee for such an extension of time or credit any overpayment for an
11 extension of time to Deposit account 06-2129.

12 Respectfully submitted,

13 
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20 **CERTIFICATE OF MAILING**

21 I hereby certify that this correspondence is being deposited with the United State Postal

1 Service as Express Mail NO. EV 278559022 US in an envelope addressed to: Mail Stop RCE
2 Commission for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on the 28 day of
3 September, 2004.

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